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Segmentation of P2P Accommodation Guests based on Their Experiences of Host Territoriality

Introduction

Peer-to-Peer (P2P) accommodation concerns an economic exchange involving people's private space (Wang & Li, 2020). On one hand, P2P accommodation allows regular people to rent out available home space to stranger travelers for a short period of time; on the other hand, it provides travelers opportunities to use space in others' homes, satisfying a need for an authentic and distinctive travel experience (Lyu, Li, & Law, 2019). P2P accommodation rentals are hosts' homes, toward which hosts possess a strong sense of ownership (Altman, 1975). To protect their homes, hosts may demonstrate territoriality toward P2P accommodation guests. Host territoriality refers to the tendency of P2P accommodation hosts to construct, communicate, maintain, and restore their sense of ownership toward the rental space (Brown, Lawrence, & Robinson, 2005).

Host territoriality is a multidimensional construct, with each dimension representing one type of hosts' territorial behaviors experienced by guests in the context of P2P accommodation (Wang & Li, 2020). For instance, P2P accommodation guests can be aware of host territoriality from hosts' personal items in a rental (i.e., signs of ownership); hosts may use house rules to tell guests what they can or cannot do during their stay; hosts can restrict guests' access to certain areas or items; (i.e., accessibility); and hosts may enter guests' space without invitation or approval (i.e., intrusion). Hosts' territorial behaviors could decrease guest satisfaction and intention to reuse or recommend P2P accommodation.

Depending on the levels and dimensions of host territoriality experienced by guests, guests can be categorized into different groups. Each group may exhibit distinct attitudes and behavioral inclinations. For instance, consumers have been found to develop a sense of ownership toward products by mere touch (Peck & Shu, 2009). P2P accommodation guests often have overnight stay in the rental environment and may also perceive some rental space as their own. Whereas, those who have experienced higher levels of host territoriality would be less likely to develop a sense of ownership toward the rental space, as hosts have signaled their ownership through territorial behaviors. Additionally, guests staying in different types of rentals might experience different levels of host territoriality (Wang & Li, 2020); when staying in an entire house/apartment, P2P accommodation guests are likely to have less interactions with hosts and thus perceive lower levels of host territoriality than those who stayed in a private room. Moreover, guests' evaluations of the host (e.g., warmth, trustworthy, friendliness and welcome), satisfaction with their experience, intention to reuse the rental, and intention to continue using the P2P accommodation platform would differ depending on their experiences of host territoriality.

Cluster analysis can help researchers identify homogeneous segments among consumers (Sarti, Darnall, & Testa, 2018). The existing studies focus on consumer segmentation using demographic and behavioral characteristics in P2P accommodation. For instance, there have been studies adopting motivation-based segmentation to identify consumers having similar motivation of using P2P accommodation (Guttentag, Smith, Potwarka, & Havitz, 2018). However, P2P accommodation guests are heterogeneous not only in demographics and behavioral characteristics (Lutz & Newlands, 2018), but also in their experiences of host territoriality. Identifying homogeneous groups of P2P accommodation guests based on their experience of host territoriality can shed light on providing differentiated services and recommendations on future P2P accommodation bookings. In addition, P2P accommodation guests are very likely to experience multiple types of territorial behaviors in one trip. Segmenting guests can help researchers understand how different territorial behaviors are combined to be used by hosts in P2P accommodation, which will help P2P accommodations to develop customized host training programs and gauge the

severity of host territoriality in the whole community.

Therefore, this study attempts to segment guests based on their experiences of host territoriality and examine whether segments are different in their evaluations of the host, satisfaction, behavioral intentions, and felt ownership of the rental space.

Methodology

An online survey targeting Airbnb guests was conducted in June 2018. CriticalMix, an online panel company, was hired for data collection. The questionnaire consisted of three parts. The first part captured respondents' previous experiences of using Airbnb, which was mainly used for identifying qualified participants. Respondents were asked to indicate how many times they had used Airbnb, the time of their last Airbnb experience, and the type of rental they used in their last experience. Those who had never used Airbnb rentals were screened out, as well as respondents whose last Airbnb experience was more than 12 months prior to the survey time. The second part of the questionnaire captured respondents' cognitive and affective experiences during their stay in Airbnb rentals, including experiences of host territoriality, their overall evaluations of the host and the experience, and their future behavioral intentions regarding the use of Airbnb rentals. The last part concerned respondents' demographic characteristics.

Host territoriality was measured using a scale recently developed by the first author and a colleague. The process of scale development can be briefly summarized as following: First, dimensions of host territoriality and the initial scale items were extracted based on examples of host territoriality reported by 116 Airbnb guests; second, an expert panel and a subject panel were used for the assessment of items' content validity; third, data collected from 911 Airbnb guests were used to purify and refine the scale; and finally, a new dataset (i.e., the one used in this study) was collected to further assess the convergent validity, discriminant validity, and nomological validity of the scale. As a result, an 18-item scale consisting of four dimensions was developed and found to have good validity and reliability. The scale was adopted in the present study. Specifically, respondents were asked to indicate their level of agreement with 18 statements associated with four dimensions of host territoriality—accessibility (e.g., *the host did not allow me to use certain areas in the rental*), house rules (e.g., *the host was very specific about what I could or could not do in the rental*), signs of ownership (e.g., *the host had his/her personal items placed around the rental*), and intrusion (e.g., *the host invaded my privacy during my stay*). Perceived warmth and competence of the host, satisfaction with their stay, intention to continue using Airbnb, and future behavioral tendencies were measured using a seven-point scale.

K-means clustering analysis involving 18 host territoriality items was undertaken. Items related to the same dimension were aggregated to reduce multicollinearity. Chi-square and one-way ANOVA were used to examine the differences between the identified segments regarding demographic characteristics, evaluations of hosts, satisfaction, and behavioral tendencies.

Results

A total of 820 respondents completed the survey and 217 of them failed to pass the attention-check questions or explicitly mentioned their responses could not be used in data analysis. Therefore, the valid sample size was 603. About 48.3% of the respondents were aged between 25 and 44 years old. A majority of the respondents were female (53.1%), married or partnered (65.3%), white (82.3%), and a bachelor's degree or above. Majority (74.8%) of the respondents stayed in an entire house or apartment, and 22.4% stayed in a private room.

Before items in each dimension of host territoriality were aggregated, the internal consistency of each

dimension was calculated using Cronbach's alpha. The values varied from 0.853 to 0.946 (Access-0.940, Rule-0.853, Signs of Ownership-0.896, Intrusion-0.946), indicating good internal consistency of the measures.

Clustering of the data resulted in a three-cluster solution. Discriminant analysis was used to assess the accuracy of the identified solution. The two canonical discriminant functions extracted were significant ($p < 0.001$). The results supported the three-cluster solution, as the hit ratio is 95.5%, indicating 576 out of 603 respondents were correctly classified in their predicted cluster.

Table 1 displays the groups means for each cluster, in addition to the results of univariate ANOVAs comparing the mean scores for each cluster. Based on their experiences of host territoriality, the three clusters were named Space Borrowers, Space Owners, and Space Users.

Table 1. Mean values of perceived host territoriality across three clusters

	Space Borrowers (n=187)	Space Owners (n=184)	Space Users (n=232)	<i>F</i>	<i>p</i>
Accessibility	5.19	1.88	2.30	512.83	<0.001
House Rules	5.42	2.43	5.22	608.89	<0.001
Signs of Ownership	4.95	3.14	2.93	109.14	<0.001
Intrusion	2.70	1.33	1.34	118.24	<0.001

The Space Borrowers comprises 31.0% of the respondents, who experienced higher levels of access constraints, more house rules, being surrounded by hosts' personal items and reported a slightly higher level of intrusion than other two clusters during P2P accommodation experiences. The Space Owners, accounting for about 30.5% of respondents, reported to experience lower level of host territoriality in every aspect. The Space Users, representing 38.5% of the respondents, reported to mainly experience house rules during their stay.

Table 2 shows the demographic attributes of the three clusters. Chi-square tests indicated that the three clusters differed in gender, age, and marital status, but not race. Space Borrowers included more male than the other two groups, more respondents aged between 18 and 34 years old, less senior and married respondents. Young (Fraine, Smith, Zinkiewicz, Chapman, & Sheehan, 2007) and male (Kaya & Weber, 2003) people have been found to be more territorial than others. Likely, when hosting young males, P2P accommodation hosts experienced a higher level of the need to protect their property and thus demonstrated more territoriality. The group of Space Borrowers was constituted of more respondents who stayed in a private room compared with the other two groups, probably because people who stayed in a private room had more interactions with hosts (i.e., more chances to experience host territorial behaviors) than those who stayed by themselves in an entire rental.

Table 2. Demographic profile of three clusters

	Space Borrowers (n=187)	Space Owners (n=184)	Space Users (n=232)	Chi-square	df	p
Gender (n=600)				22.603	2	<0.001
Male	40.4%	25.4%	34.3%			
Female	22.5%	35.0%	42.5%			
Age (n=602)				13.616	4	0.009
18-34	38.7%	27.3%	34.0%			
35-54	30.2%	26.7%	43.1%			
55 and above	24.3%	37.4%	38.3%			
Marital Status (n=599)				11.566	4	0.021
Single	39.3%	22.7%	38.0%			
Married	29.2%	32.0%	38.8%			
Other	20.0%	41.8%	38.2%			
Race (n=598)				3.014	6	0.807
Asian	37.8%	35.1%	27.0%			
Black or African American	29.3%	29.3%	41.5%			
White	30.2%	30.2%	39.5%			
Other	36.4%	27.3%	36.4%			
Type of Rental				53.517	2	<0.001
Private Room	40.6%	16.8%	12.1%			
Entire House/Apartment	56.7%	80.4%	84.9%			
Shared Room	2.1%	1.6%	0.4%			
Other	0.5%	1.1%	2.6%			

The three clusters were compared to assess (1) their experience of using Airbnb, (2) their evaluations of the host, (3) felt ownership of the rental, (4) satisfaction, (5) intention to reuse the rental, and (6) loyalty toward the Airbnb platform. Tukey HSD post-hoc testing was used when homogeneity of variances was satisfied; otherwise, Games-Howell post-hoc testing was employed.

Table 3 indicated that the three clusters were not different in their experiences of using Airbnb, but had significant differences regarding how they felt about the host and the ownership of rental space, their satisfaction with the experience, their intention to reuse the rental, and their loyalty toward the Airbnb platform.

Table 3. Differences in attitudes and behavioral tendencies by cluster

	Space Borrowers (n=187)		Space Owners (n=184)		Space Users (n=232)		F	p	Post Hoc
	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation			
Being experienced in using Airbnb	5.123	1.279	5.022	1.330	4.832	1.451	2.485	0.084	None
Felt ownership of space	4.314	1.424	4.997	1.297	5.253	1.147	28.732	<0.001	1 & 2; 1 & 3
Warmth	5.027	1.472	5.538	1.444	5.664	1.272	11.715	<0.001	1 & 2; 1 & 3
Trustworthy	5.476	1.333	5.908	1.075	6.017	1.048	12.273	<0.001	1 & 2; 1 & 3
Competence	5.102	1.602	5.728	1.427	5.793	1.326	13.645	<0.001	1 & 2; 1 & 3
Experience Satisfaction	5.652	1.584	6.527	0.874	6.181	0.967	33.908	<0.001	1 & 2; 1 & 3
Intention to continue using Airbnb	5.160	1.596	6.071	1.104	6.181	1.015	39.491	<0.001	1 & 2; 1 & 3
Intention to use the rental	5.150	1.513	5.953	1.083	6.078	1.143	31.799	<0.001	1 & 2; 1 & 3

Post-hoc analysis results further demonstrated that compared with Space Owners and Space Users, Space Borrowers were less likely to consider the rental space as their own, perceived the host to be less warm, trustworthy and competent, reported lower level of satisfaction with their experience, and were less likely to reuse the rental in the future or continue using the Airbnb platform. It was interesting that Space Owners and Space Users did not differ significantly in their evaluations of the host, perceived ownership of the space, satisfaction and future behavioral tendencies regarding Airbnb use.

Discussions

Three distinct guest groups were identified based on their experiences of host territoriality during the P2P accommodation stay. The first cluster, *Space Borrower*, contained P2P accommodation guests who observed mixed types of hosts' territorial behaviors. Guests in this cluster also rated their hosts less warm, competent, and trustworthy, their experience less satisfied, and their intentions to reuse the rental or other Airbnb rentals lower than guests in the other two clusters.

The second cluster, *Space Owner*, consisted of guests who experienced little host territoriality during their stay. The third cluster, *Space User*, included guests who experienced host territoriality mainly through the house rules requested by hosts. It is interesting that perceived space ownership, evaluations of the host, experience satisfaction, and behavioral intentions regarding the P2P accommodation rental or Airbnb platform did not differ in these two groups. That is, despite the use of house rules, the overall experience of guests in cluster three was not substantially affected.

Host territoriality is largely overlooked in P2P accommodation research. Findings of this study show that nearly one third of respondents fell into the group of *Space Borrowers* and reported to experience some types of territorial behaviors. Therefore, host territoriality is not uncommon in P2P accommodation guests' experiences and warrants more research in the future.

This study shed light on understanding the dimensionality of host territoriality. The magnitudes of host territoriality differentiated the *Space Borrowers* from the other two groups, indicating territorial hosts seemed to use various territorial behaviors at a time. This may serve as an evidence that host territoriality is a superordinate construct and should be measured reflectively (Edwards, 2001). It should be noted that the Intrusion factor explained much less variance than other factors. Despite the *Space Borrowers* reported significant higher levels of intrusion than the other two groups, the mean of the Intrusion factor were still low. That is, P2P accommodation guests might rarely observe intrusive behaviors from hosts.

Additionally, findings of this study suggest that host territoriality may be a hygiene factor or dissatisfier in P2P accommodation guests' experiences. A dissatisfier has negative asymmetric effect on guest experience, as it only gives rise to dissatisfaction but cannot trigger satisfaction (Ju, Back, Choi, & Lee, 2019). In the present study, it has been found that although *Space Owners* reported significantly lower levels of host territoriality than *Space Users*, *Space Owners* and *Space Users* were not different in their satisfaction with P2P accommodation experiences. Likely, experiencing high levels of host territoriality decreased guest satisfaction, but reduced levels of host territoriality could not boost guest satisfaction.

This study presents host territoriality as a novel aspect for understanding the heterogeneity of P2P accommodation guests' experiences. P2P accommodation hosts should learn to properly express their ownership of the rental space and control the level of territoriality in their direct or indirect interactions with guests. For instance, hosts should use house rules to clearly communicate their expectations regarding guests' behaviors. P2P accommodation platforms can use the approach in this study to identify segments substantially affected by host territoriality and develop recovery strategies to maintain solid customer relationship.

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